

Claims.

1. Injection device (1) for the introduction of a fluid into a metallurgical vessel having a refractory lining, the device
5 - being removably insertable in the lining;
 - comprising a refractory first body (2) and a refractory second body (3) fittingly assembled, the first body (2) being made of a refractory material less permeable to the fluid than the material of the second body (3),
 the first and second bodies
10 - having each a surface (4, 5) adapted to contact molten metal; and
 - having each fluid passages (6, 7) extending from fluid feeding means (8) to a surface (4, 5) adapted to contact molten metal,
 the relative flow resistance of the fluid passages (7) in the second body (3) being higher than that of the fluid passages (6) in the first body (2), the fluid passages (6) in the first body (2)
15 being constituted of slots or bores, **characterised in that** the fluid passages (6) in the first body (2) are independent from the fluid passages (7) in the second body (3).
2. Injection device according to claim 1, **characterised in that** the second body (3) is fittingly inserted in the first body (2).
3. Injection device according to claim 2, **characterised in that** the second body (3) is inserted in
20 the middle of the first body (2).
4. Injection device according to claim 3, **characterised in that** the fluid passages (6) in the first body are substantially parallel to the interface between the first and second bodies (2,3).
5. Injection device according to claim 3, **characterised in that** the fluid passages (6) in the first body are aligned radially from the centre point of the second body (3).
- 25 6. Injection device according to claim 1, **characterised in that** the second body is made of a refractory material permeable to the said fluid.
7. Injection device according to claims 6, **characterised in that** the second body is made of a pressed refractory material.
8. Injection device according to claim 1, **characterised in that** the slots or bores are of controlled
30 direction and opening sizes.
9. Injection device according to claim 1, **characterised in that** the first body is made from a castable material.
10. Process for the injection of a fluid into a metallurgical vessel comprising the steps of
 a) feeding an injection device (1) with the fluid to introduce into the metallurgical vessel;
35 b) injecting the said fluid through a initiating section (3) of the injection device (1) having

higher fluid flow resistance than the remainder of the injection device;

c) using the fluid flow streaming from the said initiating section (3) for cleaning and opening fluid passages (6) in an injection section (2) of the injection device having less fluid flow resistance than the initiating section;

5 d) injecting the fluid into the metallurgical vessel through the injection section (2) while the initiating section (3) substantially ceases to allow fluid passage.